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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,595	06/22/2006	Takahiro Nagaoka	033010-107	1363
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EXAMINER BONK, TERESA				
ART UNIT 3725		PAPER NUMBER		
NOTIFICATION DATE 03/04/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com  
offserv@bipc.com

### Office Action Summary

**Application No.**

10/550,595

**Applicant(s)**

NAGAOKA ET AL.

**Examiner**

Teresa M. Bonk

**Art Unit**

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-20, 23, 24, 26, 28, 30, 31, 34 and 40 is/are rejected.
- 7) ☒ Claim(s) 21, 22, 25, 29, 33 and 35-39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/23/09
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 15-40 have been considered but are moot in view of the new ground(s) of rejection.

### ***Specification***

The disclosure is objected to because of the following informalities: The original specification, submitted on September 23, 2005, is still replete with lack of spacing between words. Applicant has remedied the example given in the last Office action (page 1, line 9); however, there are many more that have not been addressed. The following are more examples, but not a complete listing of all instances: page 2, lines 19 and 24; page 3, lines 8-9; and page 5, lines 1, 10, 12, 25, and 27.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16, 18, 24, 26, 28, 30, and 32 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16, 24, and 32, require "controlling/adjusting a feed amount of a wire on the wire reel or a twisting torque on the wire." It is not clear how this can be accomplished since there is no structure set forth for completing such actions.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 31 is rejected under 35 U.S.C. 102(b) as being anticipated by Ishizuka et al. (hereafter “Ishizuka”) (US Patent 5,129,725), newly cited.**

Ishizuka discloses a wire-reel identifying method comprising: providing a first to-be-detected portion (grid portion 1B) and a second to-be-detected portion (grid portion 1A) on a wire reel [since no structure has been provided as to the “wire reel,” it is considered to be met by rotating scale 1 which is fixed to a measuring object (wire reel) not shown which is rotatable, Column 14, lines 15-17]; detecting the first to-be-detected portion (grid portion 1B) with a first detecting apparatus (reading device 2B) to detect an amount of rotation of the wire reel [this invention is capable of “detecting an amount...of rotation of a rotational object” Column 1, lines 30-31]; detecting the second to-be-detected portion (grid portion 1A) with a second detecting apparatus (reading device 2A) during rotation of the wire reel, as seen in Figure 6; and counting with a control circuit the second to-be-detected portion detected with the second detecting apparatus to detect a type of the wire reel [As seen in Figure 12A/B, a signal processing circuit is annexed to the rotary encoder, shown in Figure 6 and described above, including a counter 72; “type of wire reel” is considered to be the “absolute signal;” Column 17, lines 17+- Column 18, lines 20].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 15, 19, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka in view of Hanagasaki et al. (hereafter “Hanagasaki”) (US Patent 5,515,887), previously cited.**

With regards to claims 15 and 19, Ishizuka discloses the invention substantially as claimed except for a reinforcing bar binder comprising: a storing chamber provided in a main body of the reinforcing bar binder for mounting a wire reel around which a wire for binding a reinforcing bar is wound, the wire being twisted for binding the reinforcing bar after it is wound around the reinforcing bar, and the storing chamber being provided with a detecting device. Hanagasaki is a wire reel for use in a binding machine relied upon to teach a reinforcing bar binder (1) comprising: a storing chamber (10/11) provided in a main body of the reinforcing bar binder for mounting a wire reel (3) around which a wire for binding a reinforcing bar is wound, the wire being twisted for binding the reinforcing bar after it is wound around the reinforcing bar, and the storing chamber being provided with a detecting device (optical sensor 22), as seen in Figure 3. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Ishizuka's detecting apparatus in conjunction with Hanagasaki's reinforcing binder because applying a known technique to a known device ready

for improvement yields predictable results; such as detecting the “rotation amount...of rotation parts” [Ishizuka: Column 1: 20-30].

With regards to claim 40, Ishizuka also discloses wherein the control circuit receives a first signal (reference position signal) when the first detecting apparatus (2B) detects the at least one first to-be-detected portion (1B) and a second signal when the first detecting apparatus detects another first-to-be-detected portion on the wire reel [Column 17, lines 24-50].

With regards to claim 23, Ishizuka discloses a method comprising: counting, during an amount of rotation of the wire reel detected by a first detecting apparatus (2B) for detecting a first to-be-detected portion (1A), a second to-be-detected portion (1B) provided on the wire reel and passing a second detecting apparatus (2B). Ishizuka discloses the invention substantially as claimed except for the wire-reel identifying method utilizing a reinforcing bar binder comprising a storing chamber (10/11) provided in a main body of the reinforcing bar binder for mounting a wire reel (3) around which a wire (4) for binding a reinforcing-bar (30) is wound, the wire being fed by rotating the wire reel and being twisted for binding the reinforcing bar after it is wound around the reinforcing bar, as seen in Figure 1. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Ishizuka’s detecting apparatus in conjunction with Hanagasaki’s reinforcing binder because applying a known technique to a known device ready for improvement yields predictable results; such as detecting the “rotation amount...of rotation parts” [Ishizuka: Column 1: 20-30].

**Alternatively, claims 15, 19, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanagasaki in view of Ishizuka.**

Hanagasaki discloses is a wire reel for use in a reinforcing bar binder (1) comprising: a storing chamber (10/11) provided in a main body of the reinforcing bar binder for mounting a wire reel (3) around which a wire (4) for binding a reinforcing bar (30) is wound, the wire being twisted for binding the reinforcing bar after it is wound around the reinforcing bar, as seen in Figure 1, and the storing chamber being provided with a detecting device (optical sensor 22), as seen in Figure 3.

Hanagasaki discloses the invention substantially as claimed except for a wire-reel identifying method comprising: providing a first to-be-detected portion and a second to-be-detected portion on the wire reel; detecting the first to-be-detected portion with a first detecting apparatus to detect an amount of rotation of the wire reel; detecting the second to-be-detected portion with a second detecting apparatus during rotation of the wire reel; and counting with a control circuit the second to-be-detected portion detected with the second detecting apparatus to detect a type of the wire reel.

Ishizuka discloses a wire-reel identifying method comprising: providing a first to-be-detected portion (grid portion 1B) and a second to-be-detected portion (grid portion 1A) on a wire reel [since no structure has been provided as to the "wire reel," it is considered to be met by rotating scale 1 which is fixed to a measuring object (wire reel) not shown which is rotatable, Column 14, lines 15-17]; detecting the first to-be-detected portion (grid portion 1B) with a first detecting apparatus (reading device 2B) to detect an amount of rotation of the wire reel [this invention is capable of "detecting an amount...of rotation of a rotational object" Column 1, lines 30-31]; detecting the second to-be-detected portion (grid portion 1A) with a second detecting apparatus (reading device 2A) during rotation of the wire reel, as seen in Figure 6; and counting

with a control circuit the second to-be-detected portion detected with the second detecting apparatus to detect a type of the wire reel [As seen in Figure 12A/B, a signal processing circuit is annexed to the rotary encoder, shown in Figure 6 and described above, including a counter 72; “type of wire reel” is considered to be the “absolute signal;” Column 17, lines 17+- Column 18, lines 20].

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Hanagasaki's reinforcing binder with Ishizuka's detecting apparatus with because applying a known technique to a known device ready for improvement yields predictable results; such as detecting the “rotation amount...of rotation parts” [Ishizuka: Column 1: 20-30].

**Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka in view of Kusakari et al. (hereafter “Kusakari”) (US Patent 5,279,336).**

Ishizuka discloses first and second detecting apparatuses (2B, 2A respectively) that are considered to be non-contact type sensors, as seen in Figure 6. Ishizuka discloses the invention substantially as claimed except for wherein the first detecting apparatus is a contact-type sensor. Kusakari is relied upon to teach a wire supplying sensor (18) for detecting a predetermined number of rotation of a wire reel (8) that consists of a magnet (18) or “contact type” sensor. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute one of Ishizuka's non-contact type sensors for Kusakari's contact type sensor because simple substitution of one known element for another obtains predictable results.



**Claims 17, 20, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka in view of Hanagasaki or Hanagasaki in view of Ishizuka, in further in view of Kusakari.**

Ishizuka discloses first and second detecting apparatuses (2B, 2A respectively) that are considered to be non-contact type sensors, as seen in Figure 6. The combination of Ishizuka and Hanagasaki disclose the invention substantially as claimed except for wherein the first detecting apparatus is a contact-type sensor. Kusakari is relied upon to teach a wire supplying sensor (18) for detecting a predetermined number of rotation of a wire reel (8) that consists of a magnet (18) or “contact type” sensor. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute one of Ishizuka’s non-contact type sensors for Kusakari’s contact type sensor because simple substitution of one known element for another obtains predictable results.

***Allowable Subject Matter***

Claims 21, 22, 25, 29, 33, 35-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 16, 18, 24, 26, 28, 30 and 32 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa M. Bonk whose telephone number is (571)272-1901. The examiner can normally be reached on Monday-Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on 571-272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teresa M. Bonk/  
Examiner, Art Unit 3725